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Short Communication

A preliminary study on rotifer fauna of Cochin backwaters, Kerala

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Abstract

In a survey carried out during August 2000-July 2002 from nine stations along the Cochin backwaters, 42 species of rotifers were recorded. Among the 42 species, seven species are new records for Kerala.

Rotifers are considered to be an excellent and indispensable food for larvae of many finfishes and crustaceans and they are being extensively used as live feed in hatcheries all over the world. At present, numerous reports are available on rotifer fauna from the world as well as from India. The number of species recorded all over the world reached 1817, belonging to 126 genera under 34 families (Segers, 2002). A record of 310 species of rotifers belonging to 60 genera under 24 families have been reported from India (Sharma, 1991). Segers *et al.* (1994) added 15 species and hence the total record of rotifer species from India reached 325. According to Sharma (1991), only 24 species were reported from Kerala. Later, Anuradha (1996), Gopakumar (1998) and Anitha (2003) recorded 25, 30 and 44 species of rotifers respectively from southern Kerala. The 44 species reported by Anitha (2003) and 30 species recorded by Gopakumar (1998) represented 16 genera; the former author observed 13 families and the latter documented 12 families.

From the Cochin backwaters in Kerala, Molly (2004) isolated *B. rotundiformis* and Molly *et al.* (2006) gave a systematic account on rotifers coming under the genus *Brachionus* from selected centers in Cochin backwaters. An attempt is made here to list the rotifer species available in selected centers along the Cochin backwaters.

Materials and methods

The Cochin backwaters and certain canals adjoining the system extending to around 50 kms were selected for the study during the period from August, 2000-July, 2002. Monthly collections of rotifers were made from nine stations *viz.* Vypeen, Puthuvypu, Narakkal, Cherai, Eloor, Fisheries Harbour, Ernakulam market canal, Mangalavanam and Poothotta. The collection sites are the same as given by Molly *et al.* (2006).

The plankton samples were taken from each station by filtering 500 litres of water through conical plankton net made up of bolting silk having a mesh size of 40 microns. In order to avoid sampling errors, the samples were collected from an area, instead of taking from a particular point. The filtered plankton samples were preserved using 4% formaldehyde. The rotifers were identified using a number of taxonomic papers and keys published by various authors, especially Edmondson (1959), Koste (1978), Battish (1992) and Sudzuki (1999).

Results and Discussion

A total of 42 species belonging to 20 genera and 13 families under 2 orders were recorded during the present study. Rotifers are included under the Phylum Rotifera and the rotifers recorded during the present study belong to the Class Monogononta. The systematic list of rotifers collected during the present study is given in Table 1.

Table 1. Systematic list of rotifers collected during the study

Order	Family	Genera	Species
Ploimida	Brachionidae	<i>Brachionus</i>	<i>B. plicatilis</i> Muller <i>B. rotundiformis</i> Tschugunoff <i>B. angularis</i> Gosse <i>B. urceolaris</i> (Muller) <i>B. rubens</i> Ehrenberg <i>B. calyciflorus</i> Pallas <i>B. caudatus</i> Barrois and Daday <i>B. falcatus</i> Zacharias <i>B. forficula</i> Wierzejski <i>B. quadridentatus</i> Hermann <i>B. patulus</i> Muller <i>B. bidentata</i> Anderson <i>B. mirabilis</i> Daday
Ploimida	Brachionidae	<i>Keratella</i>	<i>K. tropica</i> (Apstein) <i>K. cochlearis</i> Gosse <i>K. lenzi</i> Hauer*
Ploimida	Brachionidae	<i>Platyas</i>	<i>P. quadricornis</i> Ehrenberg
Ploimida	Brachionidae	<i>Anuraeopsis</i>	<i>A. fissa</i> (Gosse) <i>A. coelata</i> (De Beauchamp)*
Ploimida	Mytilinidae	<i>Mytilina</i>	<i>M. ventralis</i> (Ehrenberg)
Ploimida	Euchlanidae	<i>Euchlanis</i>	<i>E. dilatata</i> Ehrenberg*
Ploimida	Euchlanidae	<i>Dipleuchlanis</i>	<i>D. propatula</i> (Gosse)
Ploimida	Epiphanidae	<i>Epiphanes</i>	<i>E. macrourus</i> Barrois and Daday
Ploimida	Epiphanidae	<i>Microcodides</i>	<i>M. chlaena</i> (Gosse)*
Ploimida	Colurellidae	<i>Lepadella</i>	<i>L. patella</i> (Muller) <i>L. ovalis</i> (Muller)
Ploimida	Lecanidae	<i>Lecane</i>	<i>L. unguolata</i> (Gosse) <i>L. leontina</i> (Turner) <i>L. luna</i> Muller
Ploimida	Lecanidae	<i>Monostyla</i>	<i>M. bulla</i> Gosse <i>M. lunaris</i> (Ehrenberg)* <i>M. quadridentata</i> Ehrenberg <i>M. hamata</i> (Stokes)
Ploimida	Notommatidae	<i>Cephalodella</i>	<i>C. catellina</i> (Muller)*
Ploimida	Notommatidae	<i>Scardium</i>	<i>S. longicaudum</i> (Muller)
Ploimida	Trichocercidae	<i>Trichocerca</i>	<i>T. porcellus</i> (Gosse)
Ploimida	Synchaetidae	<i>Polyarthra</i>	<i>P. vulgaris</i> Carlin
Ploimida	Dicranophoridae	<i>Enentrum</i>	<i>E. marinum</i> (Dujardin)*
Flosculariacea	Hexarthridae	<i>Hexarthra</i>	<i>H. intermedia</i> (Wizniewski)
Flosculariacea	Filiniidae	<i>Filinia</i>	<i>F. terminalis</i> (Plate) <i>F. longiseta</i> (Ehrenberg)
Flosculariacea	Testudinellidae	<i>Testudinella</i>	<i>T. patina</i> (Hermann)

* Not reported earlier from Kerala

Out of the 42 species recorded, 38 species under 10 families belong to the Order Ploimida and only 4 species of 3 families were recorded under the

Order Flosculariacea. The number of species observed under different families is depicted in Fig.1.

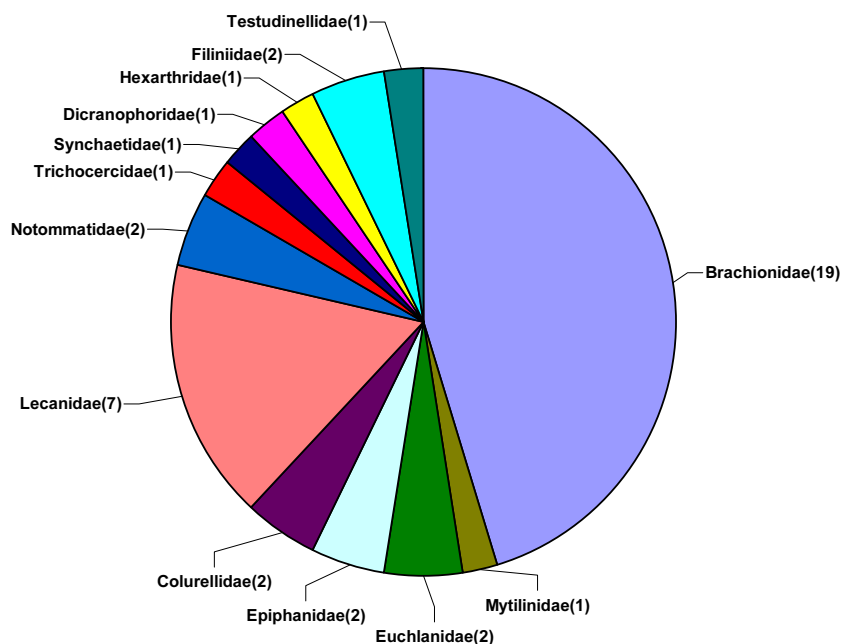


Fig. 1. Number of species observed under different families

Out of the 60 genera reported from India, only 20 were recorded from the backwaters of Cochin during the present investigation. As the state of Kerala is blessed with several water bodies ranging from freshwater to brackishwater with their numerous tributaries suitable for the growth of rotifers, most of them still remain unexplored in relation to systematic studies on rotifers, necessitating further studies.

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